In re Appln. of Zhu et al.
Application No. 10/775,979

REMARKS

Discussion of Claim Amendments

Claims 1-3 have been amended to recite that if a slow evaporating solvent is present, it is present in an amount less than 5% by weight of the jet ink composition. The amended claims are supported by the original claims and the specification, e.g., paragraph 0020. No new matter has been added.

The Office Action

The Office Action sets forth the following grounds for rejection:

1. Claims 1, 3-5, 10, 12-13, 15, 17-20, and 22 are rejected under 35 U.S.C. § 102(e), as allegedly anticipated by Zou et al. (USP 6,726,756); and

2. Claims 2, 6-9, 11, 14, 16, 21, and 23-27 are rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Zou et al.

Discussion of Anticipation Rejection

Claims 1, 3-5, 10, 12-13, 15, 17-20, and 22 are rejected as allegedly anticipated by Zou et al.

Applicants have amended independent claims 1 and 3 as indicated. Zou et al. fails to disclose a jet ink composition containing a rosin resin, said composition being free or substantially free of a cellulose nitrate resin, wherein a slow evaporating solvent, if present, is present in an amount less than 5% by weight of the jet ink composition. If there is no slow evaporating solvent, then Zou et al. fails to disclose the claimed invention because Zou et al. requires a slow (or low) evaporating solvent; see column 3, lines 15-46, particularly lines 15-16: "The liquid vehicle includes a relatively low evaporating solvent."

Zou et al. fails to disclose the presently claimed invention when a slow evaporating solvent is present therein because the low evaporating solvent is present in greater amounts in Zou et al; see, for example, column 3, lines 16-21: "the liquid vehicle of the ink composition includes at least about 30% or more, preferably 50% or more, and more preferably about 60% or more, of a solvent or a solvent blend that has an evaporation rate of up to 1.5 (±0.2)

relative to n-butyl acetate standard which has an evaporation rate of 1.0...." It is disclosed that the liquid vehicle can be present typically up to 98% by weight of the ink composition.

Further, Zou et al. discloses only two ink formulations (Ink Formulation Nos. 1-2, column 6, lines 5-50) wherein a rosin resin is used. In these formulations, the amounts of low evaporating solvents used are higher than the presently recited amounts. Thus, the low evaporating solvent, 1-methoxy-2-propanol is used in an amount of 78% and methyl lactate in an amount of 5% by weight of the ink composition in Ink Formulation No. 1 and 1-methoxy-2-propanol is used in an amount of 83% by weight of the ink composition in Ink Formulation No. 2.

In view of the foregoing, Zou et al. fails to disclose the subject matter of claims 1 and 3, and their dependent claims 10, 12-13, 15, 17-20, and 22. Accordingly, the anticipation rejection should be withdrawn.

Discussion of Obviousness Rejection

Claims 2, 6-9, 11, 14, 16, 21, and 23-27 are rejected as allegedly unpatentable over Zou et al.

Claim 2 is independent. Claims 6-9, 14, 16, 21, and 23-27 are directly or indirectly dependent upon independent claim 1. Claim 11 is dependent upon independent claim 3. As discussed, independent claims 1-3 have been amended to recite that if a slow evaporating solvent is present, it is present in an amount less than 5% by weight of the jet ink composition. These claims also require the presence of a rosin resin. As discussed, Zou et al. teaches two ink formulations containing rosin resin and which have high quantities of low evaporating solvent. Zou et al. fails to suggest to those of ordinary skill in the art the invention recited in these claims. Zou et al. attempts to solve the problem of evaporation of the ink solvent from the ink composition when it is in the printer. As a solution to the problem, Zou et al. provides low evaporating solvents in large quantities. Those of ordinary skill in the art would not be motivated, in light of the teachings in Zou et al., to eliminate or reduce the amount of the low evaporating solvent to below 5% by weight of the ink composition. To so eliminate or reduce the amount of the low evaporating solvent would mean to increase the amount of high evaporating solvents; however, that would go against the teachings of the cited reference. If so modified, the modified ink composition (containing

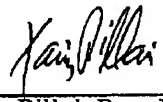
high evaporating solvents) would destroy the intended function of Zou et al., i.e., it would be unsuitable for Zou et al.'s purpose, namely, to reduce or eliminate ink make-up. See, for example, *In re Fritch*, 23 USPQ2d 1780 (Fed. Cir. 1992) which held that a proposed modification is inappropriate for an obviousness inquiry when the modification renders the prior art reference inoperable for its intended purpose. Accordingly, there is no obviousness.

In view of the foregoing, the obviousness rejection should be withdrawn.

Conclusion

The application is considered in good and proper form for allowance. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



Xavier Pillai, Reg. No. 39,799
LEYDIG, VOIT & MAYER, LTD.
Two Prudential Plaza, Suite 4900
180 North Stetson Avenue
Chicago, Illinois 60601-6780
(312) 616-5600 (telephone)
(312) 616-5700 (facsimile)

Date: December 29, 2004